

7
CLAIMS

What is claimed is:

1. A gastrointestinal system comprising:
a carrier comprising an actuator in operative communication with at least one traction member, said actuator moving said at least one traction member relative to said carrier, wherein a portion of said at least one traction member is sufficiently compliant so as to deform in conformance with a shape of a gastrointestinal tract during traction therealong.
2. The gastrointestinal system according to claim 1, wherein said at least one traction member is movably supported across supports extending from said carrier, and wherein a portion of said at least one traction member between said supports is sufficiently compliant so as to deform in conformance with a shape of a gastrointestinal tract during traction therealong.
3. The gastrointestinal system according to claim 2, wherein said shafts are adapted to urge said at least one traction member outwards.
4. The gastrointestinal system according to claim 1, wherein a shear adherence of said at least one traction member to a gastrointestinal tract in a direction along a surface of the gastrointestinal tract is greater than a tensile adherence of said at least one traction member to the gastrointestinal tract in a direction perpendicularly away from the surface of the gastrointestinal tract.
5. The gastrointestinal system according to claim 1, wherein said at least one traction member is arranged for rotation about a pulley system.
6. The gastrointestinal system according to claim 5, wherein said pulley system is coupled to said actuator by a gear train.
7. The gastrointestinal system according to claim 5, wherein said pulley system comprises a belt placed around pulley wheels, wherein said at least one traction member is spaced from and connected to said belt by spacers.
8. The gastrointestinal system according to claim 7, wherein said at least one traction member is more compliant than said belt.
9. The gastrointestinal system according to claim 1, further comprising an imaging device disposed in said carrier.
10. The gastrointestinal system according to claim 1, further comprising a diagnostic device disposed in said carrier.

11. The gastrointestinal system according to claim 1, further comprising a therapeutic device disposed in said carrier.
12. The gastrointestinal system according to claim 1, wherein said carrier is at least partially disposed in a removable sheath.
13. The gastrointestinal system according to claim 1, further comprising a protective funnel for introducing said gastrointestinal system in a body lumen.
14. The gastrointestinal system according to claim 1, wherein said at least one traction member comprises an elastomeric member applied over a roller, said roller being mounted for rotation on an arm and operatively connected to said actuator.
15. The gastrointestinal system according to claim 14, wherein said elastomeric member is stretched over said roller.
16. The gastrointestinal system according to claim 14, wherein said elastomeric member is coated on said roller.
17. The gastrointestinal system according to claim 14, wherein an outer surface of said roller comprises a plurality of indentations separated by walls.
18. The gastrointestinal system according to claim 14, wherein said roller includes a fluid passage arranged for fluid communication with at least one port formed in said arm, said port being connected to at least one of a suction source and a blowing source.